#### WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6:

A61F 2/06

A1

(11) International Publication Number:

WO 97/32543

(43) International Publication Date: 12 September 1997 (12.09.97)

(21) International Application Number:

PCT/CA97/00151

(22) International Filing Date:

5 March 1997 (05.03.97)

(30) Priority Data:

5 March 1996 (05.03.96) CA 2,171,047 2,175,722 3 May 1996 (03.05.96) CA 2,185,740 17 September 1996 (17.09.96) CA

2,192,520

10 December 1996 (10.12.96)

(71) Applicant (for all designated States except US): DIVYSIO SOLUTIONS LTD. [CA/CA]; 5670 Yew Street, Vancouver, British Columbia V6M 3Y3 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PENN, Ian, M. [CA/CA]; 6360 Larch Street, Vancouver, British Columbia V6R 4E9 (CA). RICCI, Donald, R. [CA/CA]; 4150 West 8th Street, Vancouver, British Columbia V6R 1Z6 (CA).

(74) Agents: NASSIF, Omar, A. et al.; McCarthy Tétrault, Suite 4700, Toronto Dominion Bank Tower, Toronto-Dominion Centre, Toronto, Ontario M5K 1E6 (CA).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL. PT. RO. RU. SD. SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

### **Published**

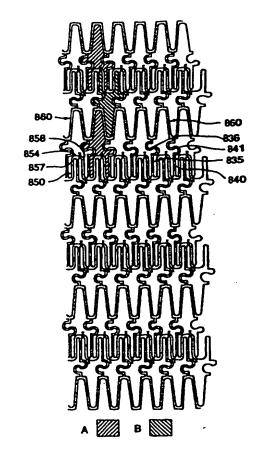
With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of

(54) Title: EXPANDABLE STENT AND METHOD FOR DELIVERY OF SAME

# (57) Abstract

An expandable stent comprising a proximal end and a distal end in communication with one another and a tubular wall disposed between the proximal end and the distal end. The tubular wall has a longitudinal axis and a porous surface defined by a plurality of intersecting members comprising a series of longitudinal struts disposed substantially parallel to the longitudinal axis of the stent. Each longitudinal strut in the series comprises flexure means for substantially complementary extension and compression of a diametrically opposed pair of the longitudinal struts upon flexure of the stent. The stent is expandable from a first, c ntracted position to a second, expanded position upon the application of a radially outward force on the stent. The provision of such flexure means in the series of longitudinal struts leads to a very desirable balance of lateral flexibility of the unexpanded stent and radial rigidity of the expanded stent.



# FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AM	Armenia	GB	United Kingdom	MW	Malawi
AT	Austria	GE	Georgia	MX	Mexico
AU	Australia	GN	Guinea	NE	Niger
BB	Barbados	GR	Greece	NL	Netherlands
BE	Belgium	HU	Hungary	NO	Norway
BF	Burkina Faso	IE	Ireland	NZ	New Zealand
BG	Bulgaria	IT	Italy	PL	Poland
BJ	Benin	JP	Japan	PT	Portugal
BR	Brazil	KE	Kenya	RO	Romania
BY	Belarus	KG	Kyrgystan	RU	Russian Federation
CA	Canada	KP	Democratic People's Republic	SD	Sudan
CF	Central African Republic		of Korea	SE	Sweden
CC .	Congo	KR	Republic of Korea	SG	Singapore
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	и	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LR	Liberia	SZ	Swaziland
CS	Czechoslovakia	LT	Lithuania	TD	Chad
cz	Czech Republic	LU	Luxembourg	TG	Togo
DE	Germany	LV	Latvia	TJ	Tajikistan
DK	Denmark	MC	Monaco	TT	Trinidad and Tobago
EE	Estonia	MD	Republic of Moldova	UA	Ukraine
ES	Spain	MG	Madagascar	UG	Uganda Uganda
FI	Finland	ML	Mali	US	United States of America
FR	France	MN	Mongolia	UZ	Uzbekistan
GA	Gabon	MR	Mauritania	VN	Vict Nam